

# MONTHLY WEATHER REVIEW,

SEPTEMBER, 1881.

(General Weather Service of the United States.)

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WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

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## INTRODUCTION:

In preparing this REVIEW the following data, received up to October 20th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 131 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 195 monthly journals and 166 monthly means from the former, and 15 monthly means from the latter; 216 monthly registers from Voluntary Observers; 56 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from the local Weather Services of Iowa, Nebraska and Missouri, and of the Central Pacific Railway Co.; reliable newspaper extracts; special reports.

## BAROMETRIC PRESSURE.

The distribution of mean atmospheric pressure over the United States and Canada for the month of September, 1881, is shown by isobaric lines (in black) upon chart No. II. The area of lowest pressure covers the northern portions of the Upper Mississippi and Missouri valleys, in which regions the greatest departures from the normal for the month occur; within this territory the pressure ranges from 29.87 to 29.93. An area of 29.90 prevails over California, mean pressure ranging from 29.84 to 29.92. The area of highest mean pressure embraces the central and western portions of the South Atlantic states, extending thence northeastward along the Middle Atlantic, New England and Nova Scotia coasts; barometer ranging from 30.08 to 30.16. Compared with the preceding month the pressure is everywhere higher, by from 0.02 to 0.15 inch, except in the Upper Mississippi and Missouri valleys, and in California, where the fall is from 0.01 to 0.10 inch.

*Departures from the Normal Values for the Month.*—Compared with the means for previous years the mean pressure of the present month is everywhere below the normal, from 0.01 to 0.18 inch, except at scattering stations along the Atlantic coast where the excess ranges from 0.01 to 0.09 inch. The regions of greatest deficiency are found in the Upper Mississippi and Missouri valleys and in the Southern Pacific coast region. Stations reporting a normal condition are as follows: Key West, Baltimore, Philadelphia, Washington and Knoxville; those reporting a departure of but 0.01 inch: Charleston, Norfolk, Montgomery, Wilmington, Savannah, Augusta, Atlanta, Cincinnati, Buffalo, Detroit, Galveston, Shreveport, Red Bluff and Pioche.

*Barometric Ranges.*—The range of pressure for the month has generally varied from 0.5 to 0.7 inch, and in the extremes from 0.23 inch at Key West to 1.03 and 1.09 inches at Wilmington and Smithville respectively. Throughout the several districts the monthly barometric range varied as follows: New England, 0.52 inch on summit of Mt. Washington to 0.84 inch at Eastport; Middle Atlantic states, 0.39 at Cape May to 0.6 at Albany; South Atlantic states, 0.34 at Cedar Keys to 1.03 at Wilmington and 1.09 at Smithville; Eastern Gulf states, 0.23 at Key West to 0.56 at Montgomery; Western Gulf states, 0.39 at Indianola to 0.55 at Mason; Rio Grande valley, 0.36 at Brownsville to 0.45 at Brackettville; Ohio valley and Tennessee, 0.37 at Pittsburg to 0.84 at Indianapolis; Lower Lake region, 0.44 at Oswego to 0.63 at Toledo; Upper Lake region, 0.55 at Port Huron to 0.9 at Marquette and 1.05 at Duluth; extreme Northwest,